AZ770

SPDT SUBMINIATURE POWER RELAY

FEATURES

- 5 kV dielectric strength, 10 kV surge
- 8 mm creepage and clearance
- Proof tracking index (PTI/CTI) 250
- 5 Amp switching capability (version “T” 10 Amp)
- 20 A high inrush current (1 Form A)
- Epoxy sealed version available
- UL Class F insulation (155°C) standard
- Reinforced insulation, EN 60730-1 (VDE 0631, part 1), 1 Form A: EN 60335-1 (VDE 0700, part 1)
- UL, CUR file E44211
- VDE certificate 40006815

CONTACTS

Arrangement	SPST (1 Form A) SPDT (1 Form C)
Ratings	Resistive load: Max. switched power: 150 W or 1250 VA (Version “T”: 150 W or 2500 VA) Max. switched current: 5 A (Version “T”: 10 A) Max. switched voltage: 30 VDC* or 250 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Rated Load **UL**	1 Form A 5 A at 250 VAC, resistive, 100k cycles 5 A at 30 VDC, resistive, 100k cycles 3 A at 250 VAC, cos phi 0.4, 100k cycles 1/8 HP at 125/250 VAC, 100k cycles C300 pilot duty, 125/250 VAC, 100k cycles TV-2 at 120 VAC 1 Form C 3 A at 250 VAC, resistive, 100k cycles 3 A at 30 VDC, resistive, 100k cycles High capacity version “T” 10 A at 250 VAC, resistive, 85°C, 100k cycles 15 A at 120 VAC, resistive, 70°C, 6k cycles B300 pilot duty, 40°C 1000 W, 250 VAC, tungsten load, 40°C, 6k cycles
VDE	5 A at 250 VAC, 85°C, 100k cycles 2 A at 250 VAC, cos phi 0.5, 85°C, 30k cycles * 3 A at 400 VAC, 85°C, 100k cycles * change-over contact tested as make contact High capacity version “T” 10 A at 250 VAC, 85°C, 15k cycles
Material	Silver nickel, silver tin oxide (high capacity version “T” only), gold plating available
Resistance	< 100 milliohms initially

GENERAL DATA

Life Expectancy **Mechanical**	Minimum operations 1×10^6
Standard version **Electrical**	1×10^5 at 5 A 250 VAC Res.
High capacity version “T” **Electrical**	1×10^5 at 10 A 250 VAC Res.
Operate Time (max.)	8 ms at nominal coil voltage
Release Time (max.)	4 ms at nominal coil voltage (with no coil suppression)
Dielectric Strength **(at sea level for 1 min.)**	5000 Vrms coil to contact 1000 Vrms between open contacts
Surge Voltage **Coil to contact**	10,000 V (at 1.2x50 µs)
Insulation **Resistance**	1000 megohms min. at 20°C, 500 VDC, 50% RH
Insulation **(according to** **DIN VDE 0110,** **IEC 60664-1)**	C250 Overvoltage category: III Pollution dregree: 3 Nominal voltage: 250 VAC
Dropout	Greater than 5% of nominal coil voltage
Ambient Temperature **Operating**	At nominal coil voltage -40°C (-40°F) to 85°C (185°F)
Vibration	1.65 mm DA at 10–55 Hz
Shock	10 g operating, 100 g damage
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P.C.
Max. Solder Temp.	270°C (518°F)
Max. Solder Time	5 seconds
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight	4.6 grams
Packing unit in pcs	100 per tray / 1000 per carton box

ZETTLER electronics GmbH - A ZETTLER GROUP Company

Junkersstr. 3, D-82178 Puchheim, Germany

phone: +49 89 800 97-0 office@ZETTLERelectronics.com
fax: +49 89 800 97-200 www.ZETTLERelectronics.com

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COIL

Power	
At Pickup Voltage (typical)	253 mW (standard coil) 113 mW (sensitive coil) 130 mW (sensitive coil high capacity version “T”)
Max. Continuous Dissipation	760 mW at 20°C (68°F) ambient
Temperature Rise (at nominal voltage)	41°C (74°F) standard coil 22°C (40°F) sensitive coil 27°C (49°F) sensitive coil high capacity version “T”
Temperature	Max. 155°C (311°F)

NOTES

1. All values at 20°C (68°F)
2. Relay may pull in with less than “Must Operate” value.
3. The vibration resistance is 0.6 mm DA at 10–55 Hz for the N.C. contact, if vibration is in length direction.
4. Specifications subject to change without notice.

RELAY ORDERING DATA

STANDARD COIL - TYPE 1 FOOTPRINT

COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	**Must Operate VDC**	**Max. Continuous VDC**	**Coil Resistance Ohm ± 10**	**Form A (SPST)**	**Form C (SPDT)**
3	2.25	3.9	20	AZ770-1A-3D	AZ770-1C-3D
5	3.75	6.6	55	AZ770-1A-5D	AZ770-1C-5D
6	4.50	7.8	80	AZ770-1A-6D	AZ770-1C-6D
9	6.75	11.7	180	AZ770-1A-9D	AZ770-1C-9D
12	9.00	15.6	320	AZ770-1A-12D	AZ770-1C-12D
18	13.50	23.4	720	AZ770-1A-18D	AZ770-1C-18D
24	18.00	31.2	1,280	AZ770-1A-24D	AZ770-1C-24D
48	36.00	62.4	5,120	AZ770-1A-48D	AZ770-1C-48D

* “1A” or “1C” denote silver nickel contacts.
Substitute “AZ770T-1AE” in place of “AZ770-1A” for high capacity version.
Add suffix “E” at the end of order number for sealed version.
Add suffix “K” at the end of order number for different footprint.
Add suffix “G” at the end of order number for gold plated contacts.

SENSITIVE COIL (STANDARD VERSION) - TYPE 1 FOOTPRINT

COIL SPECIFICATIONS				ORDER NUMBER*
Nominal Coil VDC	**Must Operate VDC**	**Max. Continuous VDC**	**Coil Resistance Ohm ± 10%**	**Form A (SPST)**
3	2.25	5.1	45	AZ770-1A-3DS
5	3.75	8.5	125	AZ770-1A-5DS
6	4.50	10.2	180	AZ770-1A-6DS
9	6.75	15.3	400	AZ770-1A-9DS
12	9.00	20.4	720	AZ770-1A-12DS
18	13.50	30.6	1,600	AZ770-1A-18DS
24	18.00	40.8	2,800	AZ770-1A-24DS

* “1A” denote silver nickel contacts.
Add suffix “E” at the end of order number for sealed version.
Add suffix “K” at the end of order number for different footprint (Type 2).
Add suffix “G” at the end of order number for gold plated contacts.

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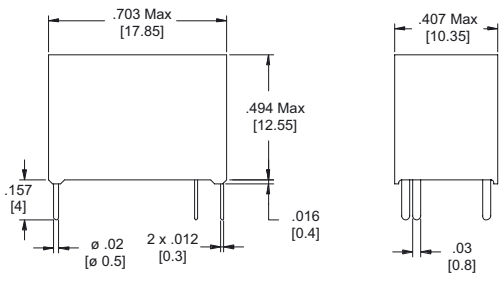
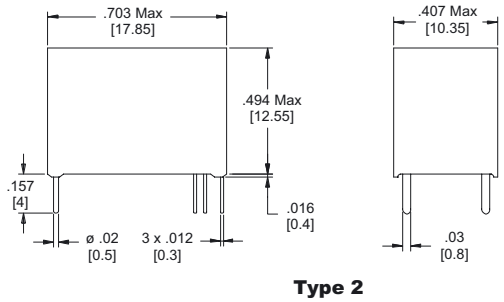
SENSITIVE COIL (HIGH CAPACITY VERSION “T”) - TYPE 1 FOOTPRINT				
COIL SPECIFICATIONS				ORDER NUMBER*
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm ± 10%	Form A (SPST)
3	2.25	5.1	38	AZ770T-1AE-3DS
5	3.75	8.5	108	AZ770T-1AE-5DS
6	4.50	10.2	155	AZ770T-1AE-6DS
9	6.75	15.3	350	AZ770T-1AE-9DS
12	9.00	20.4	620	AZ770T-1AE-12DS
18	13.50	30.6	1,390	AZ770T-1AE-18DS
24	18.00	40.8	2,480	AZ770T-1AE-24DS
48	36.00	81.6	9,920	AZ770T-1AE-48DS

* “1AE” denote silver tin oxide contacts.
Add suffix “E” at the end of order number for sealed version.
Add suffix “K” at the end of order number for different footprint (Type 2).
Add suffix “G” at the end of order number for gold plated contacts.

MECHANICAL DATA

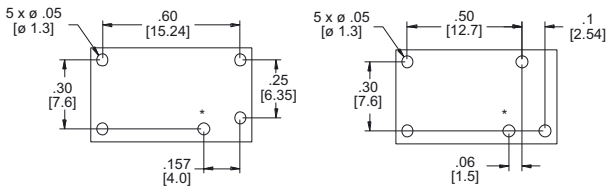


Type 1



Type 2

PC BOARD LAYOUT



Type 1 **Type 2**

Viewed toward terminals

*Not used on Form A version

WIRING DIAGRAMS

Type 1 **Type 2**

Viewed toward terminals

*Not used on Form A version

Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"

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